

IN THE CLAIMS

1. A retro-fit product security system, comprising:
 - a radio frequency identification (RFID) chip
 - 5 with an embedded unique serial number and responsive to wireless interrogation by a reader;
 - an antenna connected to the RFID chip and being critically tuned to operate at a particular frequency and supporting said wireless interrogation;
 - 10 a first product-packaging part to which the RFID chip is permanently attached by thermosetting cross-linked polymers which obviate attempts to remove the RFID chip;
 - a second product-packaging part to which the
 - 15 antenna is permanently attached by thermosetting cross-linked polymers which obviate attempts to remove the antenna; and
 - a third product-packaging part which provides for access and that is bridged by the antenna connecting
 - 20 to the RFID chip;
 - wherein, an opening of the third product-packaging part breaks the antenna and renders the RFID chip inoperable.
- 25 2. The system of claim 1, further comprising:
 - a reader for said wireless interrogation of the
 - RFID chip via the antenna and able to wirelessly collect
 - said unique serial number.
- 30 3. The system of claim 2, further comprising:
 - a product container including the first through
 - third product-packaging parts; and

a database of unique serial numbers and their associations with particular protected products originally supplied in the product container.

5 4. The system of claim 1, further comprising:

 a sensor for placement inside a product container including the first through third product-packaging parts, and connected to the RFID chip, and providing for a physical measurement and wireless
10 reporting of an attribute of an originally supplied protected product within.

 5. The system of claim 1, further comprising:

 a product container including the first through
15 third product-packaging parts, and for packaging a particular protected product originally supplied by a producer; and

 a sensor placed inside the product container, and connected to the RFID chip, and providing for a
20 measurement and wireless reporting of a change in a particular characteristic physical attribute of said product.

 6. The system of claim 1, further comprising:

25 a database of unique serial numbers and their associations with said physical measurement that provides for product-quality surveillance.

 7. A secure product container, comprising:

30 a radio frequency identification (RFID) chip with an embedded unique serial number and responsive to wireless interrogation by a reader;

an antenna connected to the RFID chip and being critically tuned to operate at a particular frequency and supporting said wireless interrogation;

5 a first product-packaging part to which the RFID chip is embedded and which makes obvious attempts to physically access the RFID chip;

a second product-packaging part to which the antenna is embedded and which makes obvious attempts to physically access the antenna; and

10 a third product-packaging part which provides for opening and that is bridged by the antenna connecting to the RFID chip;

wherein, an opening of the third product-packaging part breaks the antenna and renders the RFID
15 chip inoperable.

8. A method for delivering products to consumers, comprising:

20 embedding a wireless RFID chip in a product package with a tuned antenna that will be damaged when the product package is entered;

collecting a unique serial number from said RFID chip via wireless communication through said tuned antenna;

25 associating said unique serial number with a particular series of production runs during manufacture into a manufacturer's database;

interrogating said unique serial number directly from a particular product package;

30 comparing said unique serial number obtained in the step of interrogating with data in said manufacturer's database; and

accepting the product in said product package as safe or legitimate if said step of comparing results in a match.

5 9. The method of claim 8, wherein:

the step of collecting will fail to report said unique serial number if said product package has been entered.

10 10. The method of claim 8, further comprising:

inspecting said product package for evidence of tampering with said RFID chip or tuned antenna.

15 11. The method of claim 8, wherein:

the step of collecting will fail to report said unique serial number if said product package has been tampered with enough to detune or ruin said tuned antenna.

20 12. The method of claim 8, wherein:

the step of embedding said wireless RFID chip and tuned antenna is such that attempts to physically access them after manufacturing will be visually obvious to a consumer.

25 13. The method of claim 8, wherein:

the step of embedding said wireless RFID chip and tuned antenna further includes placing a sensor in contact with a product enclosed by said product package.

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14. The method of claim 13, further comprising:
reporting a change in a physical characteristic
of said product via said RFID chip as measured by said
sensor.